CHAPTER II

ALTERNATIVES

INTRODUCTION

This chapter presents a detailed description of four alternatives for winter visitor use in Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway. Two of the alternatives (alternatives 2 and 3) are limited specifically to actions that allow snowmobile recreation to continue in the parks. Alternative 1a is the selected alternative in the *Record of Decision for the Winter Use Plans and Final Environmental Impact Statement for Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway* (ROD) as modified by the final rule published in the *Federal Register* (Part XVII Department of the Interior, National Park Service, 36 CFR Part 7, Special Regulations, Areas of the National Park System; Final Rule) on January 22, 2001. This alternative serves as the no action alternative. Alternative 1b is the same as alternative 1a, but it defers implementation for one year.

All alternatives considered in this document must meet the stated purpose and need for action for this SEIS (see Chapter I, Purpose and Need, Scope of Analysis and Decision to be Made) by considering new snowmobile technologies and other new information related to winter visitor use.

In accordance with National Environmental Policy Act (NEPA), alternatives are presented in a comparative form and mitigation measures not already included in the alternatives are described. Alternatives are comparable to FEIS alternatives in regard to how they address existing conditions.

FORMULATION OF THE ALTERNATIVES

The alternatives for the DSEIS were formulated in response to the concern that information on new snowmobile technologies and other connected issues was not included in the original FEIS. Consequently, alternatives 2 and 3 were formulated specifically to provide an additional basis for the choice of snowmobiles as a mode of winter transportation in the parks. Each alternative proposed considers a different means of achieving the desired condition of the parks in the winter while minimizing impacts to park resources.

ALTERNATIVE DESCRIPTION

An individual alternative may consist of up to seven descriptive components: alternative actions; a map, implementation strategies; management zone description; mitigation and monitoring and adaptive management indicators and standards. All components are essential for a comprehensive understanding of each alternative. Table 9, Alternative Actions, summarizes the actions for each alternative by topic, and the components are summarized below. Table 10 summarizes alternative effects for each alternative.

Alternative Actions

The actions and assumptions common to all alternatives for the three parks are listed first, followed by actions common to all alternatives, but specific to each park. Following common actions, each alternative is explained in terms of its conceptual basis, the issues it responds to, and the specific programmatic actions, or features, that would be proposed for each park. Alternative maps show recreational zones and opportunities for each park, creating a picture of how the actions would be applied geographically.

Implementation Strategies

The outcome of the FEIS for winter use was the development of a plan for each park that addressed the existing and potential impacts on resources and values from winter recreational uses. A plan of this type is general in nature and is termed "programmatic" because it describes an overall program for winter use. Because a plan of this type is general, an analysis of environmental impacts need only be conducted at a general level. This means that it is not site specific. One of the most common comments from the public during review of a programmatic document is "how will this work?" Answering too many of these site-specific concerns in a programmatic alternative changes the level of analysis required in the document to site specific rather than programmatic. To address this concern, a section has been added to each alternative description titled *Implementation Strategies*. This section describes options that the NPS might use to implement the programmatic actions listed in the alternative.

Management Zones

In contrast to site-specificity, the definition and allocation of Management Zones is characteristic of a programmatic plan. For each alternative, the parks are divided into management zones. Management zones are defined as shown in Tables using the following characteristics.

- Desired resource condition or character
- Desired visitor experience
- Appropriate activities and facilities

Management zone definitions and locations change by alternative. The purpose of the management zone allocation is to detail the range of visitor experiences that would be provided, the resource parameters necessary to provide that experience, and to describe where in the parks each type of experience would occur. Each zone is discrete and cannot overlap with another zone. Consequently, each alternative description provides a different mix of visitor experiences and resource conditions for the parks. This approach considers and analyzes a diversity of appropriate experiences and underlying resource conditions, and helps structure future carrying capacity analyses and monitoring standards.

Adaptive Management

All alternatives include adaptive management provisions. An adaptive management plan is different from a monitoring plan in that it allows park managers to act when some information exists about a specific resource but conclusive data is currently unavailable. The first step in adaptive management is to develop and implement a management scenario based on the best available information. For example, in this document several alternatives propose a specific limit on the number of winter visitors that can enter the park daily via snowmobile. The next step is to implement an evaluation program to assess the success of the management scenario relative to defined resource thresholds. This evaluation is critical within the framework of adaptive management because of the uncertain results of the initial predictions. Managers then review the results of the evaluation program and may adjust activities or use limits to mitigate unplanned or undesirable outcomes. For example, if the visitor limits set for a park entrance have a greater or lesser effect on resource thresholds than predicted, then the number of visitors allowed to enter the parks could be raised or lowered accordingly. Further discussion on the adaptive management process may be found in Appendix I of the FEIS.

Tables 9 through 11 follow the description of alternatives and describe indicators, standards and management actions for the adaptive management scenario proposed under each alternative.

Monitoring

Monitoring is also component of all alternatives considered in this document. General resource monitoring applies when adequate information exists to make informed

management decisions based on discrete and accepted standards. It is the process of collecting information to evaluate if the objectives of a management plan are being realized. General monitoring techniques will be used to assess impacts to public health and safety; geothermal features; water quality; threatened and endangered species; trumpeter swans; and some aspects of visitor experience. A sample monitoring plan is provided for the reader in Appendix E.

Mitigation

As with alternative actions, mitigation measures represent choices for the decision-maker to incorporate based on consideration of the issues. Mitigation measures should flow logically from potential impacts disclosed in the environmental impact statement (EIS). They may involve minimizing impacts by limiting the degree or magnitude of the action, reducing or eliminating the effect over time by preservation and maintenance, or by avoiding the impact altogether.

ALTERNATIVES

Actions and Assumptions Common to All Alternatives

- None of the actions proposed under any alternative precludes closure for safety, resource protection, or other reasons as identified in 36 CFR 1.5 or 2.18.
- For the purposes of these alternatives, the following definitions are consistent throughout:
 - Oversnow motor vehicles: self-propelled vehicles intended for travel on snow, driven by a track or tracks in contact with the snow that may be steered by skis or tracks in contact with the snow. This term includes both snowmobiles and snowcoaches.
 - Snowmobiles: self-propelled vehicles intended for travel on snow, having a curb weight of not more than 1,000 pounds (450kg), driven by a track or tracks in contact with the snow, which may be steered by a ski or skis in contact with the snow. Note: The EPA definition of snowmobile is: "A vehicle designed to operate outdoors only over snow covered ground, with a maximum width of 1.5 meters or less".
 - Snowplanes: self-propelled vehicles intended for oversnow travel, having a weight of not more than 1,000 pounds (450kg) mounted on skis in contact with the snow, and driven by a pusher-propeller.
 - Snowcoaches: self-propelled, mass transit vehicles intended for travel on snow, having a curb weight of over 1,000 pounds (450kg), driven by a track or tracks and steered by skis or tracks, having a capacity of at least 8 passengers.
- If the Environmental Protection Agency (EPA) adopts standards for any class of oversnow vehicle that is more stringent than the standards resulting from this NEPA process and decision, the EPA standards shall then become the NPS standard for all oversnow vehicles entering the parks.¹
- The alternatives call for the use of sand, or an equally environmentally neutral substance, for traction on all plowed winter roads. No salts would be used. Before spring opening, sand removal operations would continue on all plowed park roads.

¹ See discussion of the proposed EPA rule in Chapter III under Air Quality.

- Investigate and implement options to reduce the palatability and accessibility to wildlife of the hydraulic fluid used in snow groomers.
- When snow depth warrants and at periodic intervals, routine plowing operations
 would include laying back roadside snowbanks that could be a barrier to wildlife
 exiting the road corridor.
- All alternatives would continue to implement transition and action plans for accessibility and support the philosophy of universal access in the parks. The NPS would make reasonable efforts to ensure accessibility to buildings, facilities, programs, and services. The NPS would develop strategies to ensure that new and renovated facilities, programs and services (including those provided by concessionaires) are designed, constructed, or offered in conformance with applicable policies, rules, regulations, and standards (including but not limited to the Architectural Barriers Act of 1968; the Americans with Disabilities Act of 1990 (ADA): the Uniform Federal Accessibility Standards of 1984 (UFAS); and the Guidelines for Outdoor Developed Areas of 1999). Architectural and Site Access and Programmatic Access: The NPS will evaluate existing buildings and existing and new programs, activities, and services (including telecommunications and media) to determine current accessibility and usability by disabled winter visitors. Action plans to remove barriers would be developed.
- Backcountry nonmotorized use would continue to be allowed throughout the parks except where designated otherwise
- The phrase "gateway communities" refers to the towns of Jackson and Cody, Wyoming, and Gardiner and West Yellowstone, Montana only.
- Require all new oversnow vehicles purchased by the parks to conform to the best environmental standards available, and that other vehicles are retrofitted whenever possible with new technologies designed to lower sound and emission levels, subject to available funding.

Actions Common to all Yellowstone Alternatives

- In Yellowstone, the NPS would continue to plow the road from Mammoth to Tower and Tower to the Northeast Entrance (Cooke City) throughout the winter. The NPS would support the state of Montana's plowing of US Highway 191 in Yellowstone.
- A designated route for *nonmotorized recreation* is defined as a marked or otherwise indicated oversnow travel way.
- Grand Canyon of the Yellowstone and the McMinn Bench bighorn sheep area would continue to be closed to winter use.
- Restrict nonmotorized uses in wildlife winter ranges and thermal areas to travel on designated routes or trails.
- Winter garbage storage facilities that are wildlife-proof would be constructed in the Old Faithful, Grant, Lake, and Canyon areas.
- Continue allowing personal non-recreation use of snowmobiles by employees and their families living in the interior of Yellowstone; however, subject to available funding, provide administrative snowcoaches for their use and encourage them to replace their current snowmobiles with cleaner and quieter machines utilizing the best available technologies.
- Increase interpretive opportunities related to the unique aspects of the winter environment by providing interpretive programs at destination areas and warming huts. Provide guided interpretive programs for organized groups on snowcoaches. Provide interpretive ski and snowshoe tours and programs such as near Tower, Canyon, Mammoth, Old Faithful, West Thumb, Madison, and West Entrance.

• Provide adequate warming huts for all visitors at Old Faithful, Norris, Madison, Canyon, Fishing Bridge, Mammoth Terraces and other appropriate sites.

Actions Common to all Grand Teton and Parkway Alternatives

- In Grand Teton and the Parkway, the following roadways would continue to be plowed:
 - Highway 26/89/287 from the south boundary of the park to Moran
 - Highway 89/287 from Moran to Colter Bay
 - Highway 26/287 from Moran to the eastern park boundary
 - Teton Park Road from Moose Junction to Taggart Lake Trailhead, and from Jackson Lake Junction to Signal Mountain Lodge; from Highway 89/287 along the Pacific Creek road to the park boundary; from Kelly to the eastern park boundary; from Gros Ventre Junction to Kelly to Mailbox Corner; and the road to the eastern park boundary at Ditch Creek
- Current winter closures would remain in effect on the Snake River floodplain, the Buffalo Fork River floodplain, and the Uhl Hill area, Willow Flats, Kelly Hill, and Static Peak (zone 9).
- Continue to provide access to inholdings and adjacent public and private lands using
 motorized means. This access would be a combination of plowed roads for wheeledvehicle access, and staging areas for snowmachines traveling to immediately adjacent
 lands.
- Reasonable and direct access to adjacent public and private lands, or to privately owned lands within the park with permitted or historical motorized access, will continue via paved and plowed routes or via oversnow routes from GTNP.
- Increase interpretive opportunities related to the unique aspects of the winter environment by providing interpretive programs at destination areas and warming huts. Provide guided interpretive programs for organized groups on snowcoaches. Provide interpretive ski and snowshoe tours and programs at locations such as Moose, Colter Bay, and Flagg Ranch visitor services.
- Phase in administrative snowmobile types that meet the best available emission and sound limits, subject to available funding. Administrative use of snowmobiles in Grand Teton is limited to law enforcement, utility and maintenance access, and search and rescue or other use as approved by the superintendent and consistent with NPS Management Policies 8.2.3.2.
- Continue destination and support facilities at Moose, Triangle X, Colter Bay, and Flagg Ranch, and add warming hut facilities along the Teton Park Road to provide visitor services and interpretive opportunities that focus on nonmotorized uses (zone 1).

Mitigation Common to All Alternatives

Water Resources

- Best management practices will be used during the construction, reconstruction, or winter plowing of trails and roads to prevent unnecessary vegetation removal, erosion, and sedimentation.
- Separate winter-motorized trails from drainages to mitigate the routing of snowpack contaminants into surface water.
- Any new or reconstructed winter use sanitary facilities will be constructed in locations and with advanced technologies that will protect water resources.
- A focused monitoring program will reduce the uncertainty of impacts from oversnow vehicles, and if necessary indicate best management practices that might be implemented.

Wildlife, Including Federally Protected Species and Species of Special Concern

- NPS personnel will patrol sensitive resources to ensure compliance with area closures.
- Monitoring of eagle populations to identify and protect nests will continue. The park will continue to support the objectives of the Greater Yellowstone Bald Eagle Management Plan.
- Monitoring of wolf populations will continue.
- Lynx surveys will be undertaken to document the distribution and abundance of lynx in the parks and their relationship to packed surfaces. The presence of other carnivores will be documented. The parks will abide by the recommendations of the Lynx Conservation Assessment Strategy.
- Continue to assess grizzly bear abundance, distribution, and habitat selection, including the location of dens. The information obtained will assist park managers in protecting important habitats and planning recreational activities that minimize disturbance to bears. Monitoring grizzly bear populations will continue in accordance with the Interagency Grizzly Bear Management Guidelines and the parks' bear management plans.
- Monitoring and protecting trumpeter swan habitats and nests will continue, including the closure of nest sites, when warranted, to public access from February 1 to September 15.
- Monitoring potential or known winter use conflicts will result in area closures if necessary to protect wildlife habitat.
- Conduct snow track surveys for carnivores (including lynx) on both groomed and ungroomed routes.
- Continue to monitor use of groomed, ungroomed, and plowed surfaces by bison and other ungulates.

Cultural Resources

- Should the discovery of human remains, funerary objects, sacred objects, or objects
 of cultural patrimony occur during construction, provisions outlined in the Native
 American Graves Protection and Repatriation Act of 1990 (25 USC 3001) will be
 followed.
- Trails and trailheads will be sited to avoid adversely impacting known cultural resources, including potential cultural landscapes. In addition, the use of natural materials and colors for all permanent signs erected will allow the signs to blend into their surroundings.

Implementation Strategies

When a decision is made following this SEIS, which sets the program goals and plan in place for winter use in the parks, some strategies may be applied to assist in the implementation of the plan. Generally, these strategies are regarded as tools that currently exist within the parks' authority to assist in *implementing* the plan. The environmental impacts, adverse or beneficial, of these strategies are not specifically addressed in this SEIS, as some actions may be categorically excluded or do not require an EIS for approval. Implementation strategies are like mitigation measures in that they may function to reduce anticipated impacts as well as facilitate the achievement of a plan goal.

- Implement an information program on snow and trail conditions, points of interest, and available recreational opportunities. Through partnerships, establish park visitor contact opportunities in gateway communities and utilize state tourism program resources.
- When snowmobiles are allowed, provide an educational video for use in gateway communities and at all area snowmobile rental businesses to educate snowmobile operators regarding safety, operational laws, user etiquette, interaction with wildlife and other park visitors, and park interpretive subjects.
- Evaluate snowcoach service on the East Entrance Road if safety goals can be met. Management of avalanche danger on the East Entrance Road may mean unscheduled closures of the road to all travel.
- Establish a reservation system, with a staggered entry time, for winter visitors.
- When designing and locating the proposed new West Entrance station, include strategies to facilitate vehicle access and improve airflow and quality.
- When snowmobiles are allowed, separate snowmobile and snowcoach parking at the Old Faithful area.

ALTERNATIVE 1a- No Action

This alternative (Figures 4 and 2) was the selected alternative in the Record of Decision (ROD) for the *Winter Use Plans and Final Environmental Impact Statement for the Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway.* That decision was signed by Karen Wade, National Park Service Intermountain Regional Director, on November 22, 2000. Consequently, the version of the alternative that was published in the ROD represents the no action alternative. For clarity, elements of that decision that are not being reevaluated in this SEIS have not been repeated here. The reader is referred to Chapter I, Winter Use Plan Elements not Reevaluated in this SEIS for a complete listing of these action items.

Actions and Assumptions Common to All Units

- In the winters of 2001-2004, allow existing commercial snowcoach operators to increase their fleet size and encourage snowmobile and other new operators to purchase coaches and reduce snowmobile numbers. All limits on snowmobile use will be based on a nine-year average peak day.
 - In 2001-2002 allow snowmobile use to the current use level in YNP and GTNP and the Parkway.
 - In 2002-2003 for GTNP eliminate snowmobile use on the Teton Park Road and all motorized use on Jackson Lake².
 - In 2002-2003, allow snowmobile use at a maximum of 50% of the current use level, at the South and West Entrances of YNP. Maintain current snowmobile use levels from the East and North Entrances of YNP and the CDST and Grassy Lake road in GTNP and the Parkway.
 - In 2003-2004, all oversnow motorized visitor travel in the parks will be by snowcoach. Close the CDST through GTNP.
- Continue scientific studies and monitoring regarding winter visitor use and park resources. Close selected areas of the park, including sections of roads, to visitor use

² Discontinuance of snowplanes on Jackson Lake is not being revisited in SEIS alternatives. By the previous decision, this use is discontinued following the 2001-2002 winter season.

ALTERNATIVE1a

if scientific studies indicate that human presence or activities have a detrimental effect on wildlife or other park resources that could not otherwise be mitigated. The appropriate level of environmental assessment under NEPA will be completed for all actions as required by CEQ regulations (40 CFR parts 1500-1508).

- Give a 1-year notice before any such closure is implemented unless immediate closure is deemed necessary to avoid impairment of park resources.
- This alternative includes an affirmative commitment to implement strategies designed to provide a reasonable level of affordable winter access to park visitors.
- Permit only NPS-managed mass transit snowcoaches on designated oversnow roads.³
- Through the permitting process phase out all oversnow vehicles that do not meet the best available environmental standards for oversnow mass transit travel. Currently, the mass transit oversnow vehicle that produces the lowest emissions is the conversion van mat track.⁴
- Beginning in 2003-2004, allow mass transit snowcoaches only when their sound levels are at or below 75 decibels as measured on the A-weighted scale at 50 feet at full throttle. Continue to work with snowcoach manufacturers and operators to meet a long term goal to lower snowcoach sound levels to 70 decibels or lower.
- Prohibit late night oversnow travel from about 9 P.M. to 8 A.M.

Actions Specific to Yellowstone National Park

- Continue all existing groomed motorized routes (zone 3).
- Implement the winter use season during the period from late November to mid-March.
- Reduce administrative snowmobile use from the 106 currently used and supplement with administrative snowcoaches, subject to available funding. Phase in a limited number of administrative snowmobiles to a type that meet the best available emission and sound limits
- Allow limited use of snowmobiles by concessionaires. Require best available clean and quiet technologies as they are developed (through permit and contracts) and encourage the use of snowcoaches.

Actions Specific to Grand Teton National Park and the Parkway

- Provide opportunities for oversnow motorized trail use (zone 3) by snowcoaches only
 on the unplowed, groomed surface of the highway from Colter Bay to Flagg Ranch,
 north into Yellowstone, and the Grassy Lake Road.
- Current Flagg Ranch permit will be honored concerning access by plowed road until the current permit expires in 2008.
- Winterize facilities at Colter Bay to provide a suitable staging area for snowcoach access.

³ Note: The term "NPS managed" refers to permit management. In this case private concessionaires who operate under a permit from the NPS would provide the mass transportation snowcoach system. Under the terms of the permit or concessions contract, the NPS may stipulate, among other items, the type of services to be offered, cost to the public, and number of visitors that may be served or transported. The NPS may require that the types of vehicles used meet certain environmental and safety requirements. It is the responsibility of the NPS to monitor all services offered under permit to ensure that the public and the parks are being well served. These permits are generally offered for competitive bidding and are granted for a specific number of years.

⁴ Estimates of emissions for conventional vans converted for oversnow travel indicate that the emissions increase once the conversion is made. For this reason adherence to EPA regulations for similar wheeled vans is neither appropriate nor required.

CHAPTER II
ALTERNATIVES

Table 1. Description of management zones for alternatives 1a and 1b.

Management Zones —→	1 Destination or Support Area	2 Plowed Road	3 Groomed Motorized Route	4 Groomed Motorized Trail
Resource Condition or Character	Minimally to highly developed hubs of activity •Facilities and signs of human activity obvious, but natural elements also present •Moderate to high management and/or modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety •As small as possible while still providing essential services •Visitor use may compromise natural resource values	••As narrow as possible to protect resources, but wide enough to accommodate safety pullouts, overlooks, and trailhead areas ••Moderate to high management and/or modification of resources to accommodate operational needs, resource protection, visitor resource protection, visitor enjoyment, and safety ••Good to excellent air quality ••Visitor use may compromise resource values	•Smooth groomed snow surface •Generally gentle terrain •Good to excellent air quality •As narrow as possible to protect resources, but wide enough to accommodate asfety pullouts, overlooks, and trailhead areas •Moderate to high management and/or modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety •Visitor use may compromise resource values •Vehicles must meet sound and emission standards	•Narrower, groomed but less maintained snow surface •Gentle to moderate terrain •Vehicles must meet sound and emission standards •Generally good to excellent air quality •Human caused sound intermittent, audibility low to moderate •As narrow as possible to protect resources, but wide enough to accommodate pullouts, overlooks trailheads, trailhead areas •Minimal modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety •Visitor use may compromise resource values
Visitor Experience	Facilities convenient and blended with adjacent resources Many opportunities for social interaction High sound levels possible High probability of encountering other visitors and NPS staff	Destinations and natural attractions of high interest High probability of encountering other visitors Provides a sense of being in a natural park environment Visitor experience mostly visual Occasional quiet and solitude Commercial or residential traffic on some stretches Intermittent low to moderate sound associated with vehicular travel expected	•Destinations and natural attractions of high interest •Provides a sense of being in a natural park environment •High probability of encountering other visitors •Solitude occasionally possible, but not expected •Limited opportunities for challenge and adventure •Few outdoor skills needed •Some low-level sound associated with travel expected	•Natural attractions of high interest •Moderate probability of encountering other visitors •Chance to view the natural environment important •Solitude occasionally possible, but not expected •Some outdoor skills necessary •Some opportunities for challenge and adventure •Relatively quiet; sight and smell of vehicle exhaust not expected
Appropriate Activities and Facilities	•Visitor centers •Warming huts •Overnight lodging •Gas stations •Food services •Staging areas •Administrative facilities •Structured interpretive programs	•Wheeled vehicular travel only •Paved and unpaved roadways, signs, barriers •Interpretive media and display •Utilities •Scenic overlooks, restrooms, trailhead areas, pullouts	•Predominantly oversnow vehicular travel; some non-vehicular travel •Oversnow roads, signs, barriers •Interpretive media, programs and displays •Utilities •Scenic overlooks, restrooms, trailhead areas, pullouts	•Predominantly oversnow vehicular travel; some non-vehicular travel •Oversnow trails, signs, barriers •Utilities, scenic overlooks, trailhead areas, restrooms

Table 1a. Description of management zones for alternatives 1a and 1b.

Management Zones—→	5 Ungroomed Motorized Trail or Area	6 Groomed Nonmotorized Trail	7 Ungroomed Nonmotorized Trail or Area	8 Backcountry Nonmotorized Area	9 Sensitive Area (no winter use)
Resource Condition or Character	•Ungroomed snow surface •Marked except for frozen water surfaces •Gentle to moderate terrain •Vehicles must meet sound and emission standards •Generally good to excellent air quality •Sound levels intermittent, low to moderate •Wide enough to accommodate existing road corridor, pullouts, overlooks trailheads, trailhead areas •Low to moderate modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety •Visitor use may compromise resource values	Smooth groomed snow surface Marked and signed Generally gentle terrain Creates predictable patterns of winter use and confines resource impacts to narrow corridors Good to excellent air quality Minimal modification of resources to accommodate operational needs, resource protection, visitor enjoyments, and safety Visitor use may compromise resource values Sound from human sources is intermittent, audibility is low to nonexistant Natural sound predominates the soundscape	•Ungroomed snow surface •Marked or unmarked •Gentle to steep terrain •Creates fairly predictable patterns of winter use and confines resource impacts to relatively narrow corridors •Excellent air quality •Minimal modification of resources to accommodate operational needs, resource protection, visitor enjoyments, and safety •Natural sound predominates the soundscape •Visitor use may compromise resource values	• Appears natural and untouched by humans • Gentle to steep terrain • Excellent air quality • Little to no evidence of visitor impacts • Little to no modification of resources to accommodate operational needs, resource protection, visitor enjoyments, and safety • Visitor use may compromise resource values • Natural sound predominates the soundscape	Appears natural and untouched by humans Gentle to steep terrain Excellent air quality Natural and/or cultural resource values so vulnerable that winter visitor use is not permitted
Visitor Experience	Natural attractions of high interest Moderate probability of encountering other visitors Chance to view the natural environment important Solitude occasionally possible, but not expected Moderate outdoor skills necessary Moderate outdoor skills necessary Moderate opportunities for challenge and adventure Relatively quiet; sight and smell of vehicle exhaust not expected	•Provides a sense of immersion in a generally natural landscape •Natural attractions of high interest •High probability of encountering other users •Solitude occasionally possible, but not expected •Provides some sense of adventure •Few outdoor skills needed •Quiet desirable but not essential for visitor enjoyment	•Provides a sense of immersion in a generally natural andscape •Natural attractions of high interest •Moderate probability of encountering other users; probability increases near destination areas •Moderate opportunities for solitude •Feels somewhat distant from most comforts, conveniences, and facilities •Generally requires a commitment to time-consuming and physically and mentally exerting activities •Provides opportunities for adventure and physical challenge •Outdoor skills needed	Provides a strong sense of immersion in a very natural landscape Natural quiet expected Low probability of encountering other users; good opportunities for solitude Provides strong sense of remoteness Requires a commitment to time-consuming and physically and mentally exerting activities Good opportunities for adventure and physical challenge Outdoor skills such as route finding, avalanche hazard forecasting, and survival knowledge necessary Natural sounds predominate	Natural soundscapes predominate
Appropriate Activities and Facilities	Predominantly oversnow vehicular travel; some non-vehicular travel Oversnow roads, signs, barriers Interpretive displays Utilities, restrooms, scenic overlooks, trailhead areas	Nonmotorized activities only, such as skiing and snowshoeing Oversnow trails, markers, signs, Interpretive media Scenic overlooks, trailheads	Nonmotorized activities only, such as skiing and snowshoeing Signs or other route markers	•Nonmotorized activities only, such as skiing and snowshoeing •No facilities	•Limited resource management activities •No visitor activities or facilities

Interim Snowmobile Use Limits

For the winter use season 2002-2003, the numbers of snowmobiles allowed to use the park each day are limited to the numbers represented in the following table.

Table 3. Interim cap on snowmobile use in alternative 1a for Yellowstone/Grand Teton/Parkway area road segments 2002-2003.

Entrance	Use Limit
North Entrance	60
West Entrance	278
East Entrance	65
South Entrance	90
Continental Divide Snowmobile Trail	25
Grassy Lake Road	25

Monitoring

- In order to assess the long term effects of management actions on park resources and values resource inventory, monitoring and adaptive management will be incorporated into this decision. The tables following the discussion alternatives outline specific indicators for monitoring natural resources and visitor experience in the three park units. These indicators will be monitored to ensure protection of natural resources and park values and evaluate management success.
- This alternative also includes adaptive management provisions. It will provide for systematic feedback for park management and allow for adjustment of activities to mitigate unplanned or undesirable outcomes. Tables 4 through 9 describe indicators, standards and potential management actions for adaptive management.

ALTERNATIVE 1B

Alternatives 1a and 1b differ only in their timeframe for implementation. Under alternative 1b (Figures 2 and 4) an additional year would be allowed for the phasing in of snowcoach only travel. The phase-in period is described in detail below.

Actions Specific to Yellowstone, Grand Teton and the Parkway

- In the winters of 2002-2005, allow existing commercial snowcoach operators to increase their fleet size and encourage snowmobile and other new operators to purchase coaches and reduce snowmobile numbers. All limits on snowmobile use would be based on a nine-year average peak day.
- In 2002-2003 allow snowmobile use to the current use level in YNP and GTNP and the Parkway.
- In 2002-2003 for GTNP eliminate snowmobile use on the Teton Park Road and all motorized use on Jackson Lake.
- In 2003-2004, allow snowmobile use at a maximum of 50% of the current use level, at the South and West Entrances of YNP. Maintain current snowmobile use levels from the East and North Entrances of YNP and the CDST and Grassy Lake road in GTNP and the Parkway.
- In 2004-2005, all oversnow motorized visitor travel in the parks will be by snowcoach. Close the CDST through GTNP.

- Beginning in 2004-2005, allow mass transit snowcoaches only when their sound levels are at or below 75 decibels as measured on the A-weighted scale at 50 feet at full throttle. Continue to work with snowcoach manufacturers and operators to meet a long-term goal to lower snowcoach sound levels to 70 decibels or lower.
- Beginning in 2004-2005, limit snowcoach visitation to 93,500 (nine year average annual oversnow motorized passengers) until capacity is set through adaptive management.

Interim Snowmobile Use Limits

• For the winter use season 2003-2004, the numbers of snowmobiles allowed to use the park each day are limited to the numbers represented in the following table.

Table 4. Interim cap on snowmobile use in alternative 1b for Yellowstone/Grand Teton/Parkway area road segments 2003-2004.

Entrance	Use Limit
North Entrance	60
West Entrance	278
East Entrance	65
South Entrance	90
Continental Divide Snowmobile Trail	25
Grassy Lake Road	25

ALTERNATIVE 2

This alternative (Figures 2 and 5) is an adaptive management strategy to mitigate impacts on visitor experience and access, wildlife, air quality and natural sound while allowing snowmobile access on all existing oversnow routes. Under this adaptive management scenario, interim visitor use limits would be established for each park entrance until a long-term visitor capacity study has been completed within three years. The appropriate interim snowmobile access levels consist of a mix of visitor experiences, along with adequate protection of air quality, wildlife resources, and natural soundscapes within the parks.

Adaptive management programs would be implemented that would allow the success of the interim numbers to be assessed on an annual basis. Adaptive management programs will determine the need for adjusting snowmobile numbers up or down to ensure adequate protection of air quality, wildlife resources, visitor experience and natural soundscapes.

Adaptive management standards for this alternative are located in this chapter in Table 11, following the description of alternatives.

ALTERNATIVE 2

Actions and Assumptions Common to All Three Units

• Phase in the use of only cleaner and quieter oversnow machines in the parks.

Definition of "cleaner and quieter" and phase-in schedule as follows (all areas except Jackson Lake):

- Snowmobiles: for all rental and outfitter sleds [70+% of existing use] from year 1 (2002-3) forward, allow any production model 4-stroke snowmobile and any other models⁵ whose engine family⁶ meets an emission standard of 200 g/kW-hr (149 g/hp-hr) for CO and 75 g/kW-hr (56 g/hp-hr) for HC; for all "public snowmobiles" [other 30-%] for years 1 through 3 (2002-3, 2003-2004, and 2004-2005), allow any production model 4-stroke and any two-stroke model using bio-base fuels⁷ (10% ethanol blend fuel and full synthetic low-emission oil); Year 4 (2005-6 season) and beyond allow any production model 4-stroke snowmobile and any other models whose engine family meets an emission standard of 200 g/kW-hr (149 g/hp-hr) for CO and 75 g/kW-hr (56 g/hp-hr) for HC. A decal signifying that a snowmobile model's engine family meets the emission standard will be issued for display on snowmobile windshields. Licensed selling/certification agents outside the park would issue these "national park" certification decals as part of the Wyoming commercial registration and user fee sales process.
- Sound levels would not exceed 75 decibels as measured on the A-weighted scale at 50 feet at 40 mph pass-by for all rental/outfitter sleds, year 1 and beyond. For public snowmobiles, sound levels would not exceed 78 decibels as measured on the A-weighted scale at 50 feet at 40 mph pass-by for years 1 through 3. Beginning in year 4 (2005-6), sound levels for all snowmobiles would not exceed 75 decibels as measured on the A-weighted scale at 50 feet at 40 mph pass-by.
- <u>Snowcoaches</u>: Allow mass transit snowcoaches only when their sound levels are at or below 75 decibels as measured on the A-weighted scale at 50 feet at 30 mph pass-by. Continue to work with snowcoach manufacturers and operators to meet a long-term goal to lower snowcoach sound levels and to decrease snowcoach emission levels.
- Require park administrative and park concessionaire snowmobiles to conform to the same sound and emission requirements and phase-in schedule as "outfitter/rental" snowmobiles, as budgets and contracts allow. Park administrative and concessionaire administrative snowcoaches must conform to the same sound and emission requirements as mass transit snowcoaches.
- Immediately implement interim snowmobile use limits until a visitor capacity study is completed prior to the 2005-2006 season (within 3 years). The visitor capacity study would use one or more of the Decision Analysis Tools identified by the Federal Interagency Task Force on Visitor Capacity on Public Lands to produce visitor experience and resource standards along with indicators for long term visitor use management.
- Interim use limits and oversnow vehicle types are described by road segment in the table below.

⁵ 4-stroke technology does not guarantee low pollution or noise emissions. To clarify: all snowmobiles, 2-stroke or 4-stroke, or other means of conveyance fitting the definition of "snowmobile", are to meet the same standard for emissions expressed in this alternative feature.

⁶ The EPA certification process in which engines that are expected to have similar emission characteristics are classified in the same "engine family." Engine families are used in the process by which manufacturers can develop credits as they work toward fleet averages for emissions. An engine family is more or less defined by combustion cycle (2 or 4 stroke), cooling system, design of emission controls, bore and stroke, etc. Alternately, an engine family can consist of engines with similar emission characteristics. In either case, as long as the park has a mechanism for limiting the type of sleds entering the park, the implementation of this alternative would be feasible. In any case, it would require a listing of which engine families certify as cleaner than the emission standard

⁷In this alternative, the use of bio-based fuels and synthetic oils should be mandatory for 2-stroke snowmobiles used in the parks.

Table 5. Interim use limits proposed under alternative 2.

Road Segment	Vehicle Type	Interim Use Levels ⁸
Mammoth south to Old Faithful and east to Canyon and south to Fishing Bridge	Snowcoach and snowmobile travel	Snowmobiles entering through the North Entrance limited to 100 per day
West Entrance to Old Faithful	Snowcoach and snowmobile travel	Snowmobiles entering through the West Entrance limited to:
		•900 per day in 2002-2003, •700 per day in 2003-2004, •500 per day from 2004-2005 forward
East Entrance to Fishing Bridge	Snowmobiles only	Snowmobiles entering through the East Entrance limited to 200 per day
Fishing Bridge south to Flagg Ranch and west to Old Faithful	Snowcoach and snowmobile travel	Snowmobiles entering through the South Entrance limited to 500 per day
Continental Divide Snowmobile Trail (East Entrance GTNP to Flagg Ranch)	Snowmobiles only	Snowmobiles entering through Moran Entrance limited to 150 per day, also accounting for up to 150 per day of the 500 allowed daily through the South Entrance
Grassy Lake Road	Snowmobiles only	Feeder trail to and from national forest trails and the CDST – daily caps not applicable

• Prohibit oversnow vehicle travel, except for administrative or emergency use, into or within the parks from 8 P.M. to 7:30 A.M., except snowmobile entry through the West Entrance would be delayed until 8:30 AM.

Actions for Yellowstone National Park

- Continue all existing groomed motorized routes (zone 3).
- Lower the speed limit to 35 mph from the West Entrance to Madison to Old Faithful, and further reduce speed limit to 25 mph in specific, special areas along this segment.
- Implement the winter use season during the period from mid-November to late March.
 - Mid-November to second Tuesday in December, access only by rubber track snowcoach, snowshoes or skis.
 - Second Wednesday in December through second Sunday in March, open to access by oversnow vehicles (snowmobiles and snowcoaches), dependant upon adequate snow cover on roadways.
 - Second Monday in March until road segments are plowed, access only by snowshoes or skis.
- Require personal non-recreation snowmobiles used by employees and their families living in the interior of Yellowstone to conform to the same requirements and phase-

⁸ The rationale for these numbers is expressed in the paper by Haas 2001.

in schedule as "public" snowmobiles, as existing employment conditions allow. Subject to available funding and authority, provide administrative snowcoaches for their use.

Actions for Grand Teton and the Parkway

- Provide groomed motorized routes on the Grassy Lake Road and on the Continental Divide Snowmobile Trail (CDST). The CDST will be located immediately adjacent to the plowed roadway on a widened shoulder/borrow ditch (as future opportunities present) from the East Entrance to Moran and from Moran to Flagg Ranch.
- Permit snowmobile outfitters to operate on the CDST and the Grassy Lake Road.
- Allow snowmobile access on the frozen surface of Jackson Lake for fishing access only, "directly to and from" a fishing area with fishing gear present on snowmobile or tow sled. Snowmobiles must use Bio-Base Fuels (10% ethanol and full synthetic low emission oil). Recreational snowmobile use on Jackson Lake would not be allowed.

Table 6. Description of management zones for alternative 2.

Management Zones →	1 Destination or Support Area	2 Plowed Road	3 Groomed Motorized Route	4 Groomed Motorized Trail
Resource Condition or Character	•Minimally to highly developed hubs of activity •Facilities and signs of human activity obvious, but natural elements also present •Moderate to high management and/or modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety •As small as possible while still providing essential services •Visitor use may compromise natural resource values	•As narrow as possible to protect resources, but wide enough to accommodate safety pullouts, overlooks, and trailhead areas •Moderate to high management and/or modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety •Good to excellent air quality •Visitor use may compromise resource values	•Smooth groomed snow surface •Generally gentle terrain •Good to excellent air quality •As narrow as possible to protect resources, but wide enough to accommodate safety pullouts, overlooks, and trailhead areas •Moderate to high management and/or modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety •Visitor use may compromise resource values •Vehicles must meet sound and emission standards	•Narrower, groomed but less maintained snow surface •Gentle to moderate terrain •Vehicles must meet sound and emission standards •Generally good to excellent air quality •Human caused sound intermittent, audibility low to moderate •As narrow as possible to protect resources, but wide enough to accommodate pullouts, overlooks trailheads, trailhead areas •Minimal modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety •Visitor use may compromise resource values
Visitor Experience	•Facilities convenient and blended with adjacent resources •Many opportunities for social interaction •High sound levels possible •High probability of encountering other visitors and NPS staff	•Destinations and natural attractions of high interest •High probability of encountering other visitors •Provides a sense of being in a natural park environment •Visitor experience mostly visual •Solitude not expected •Commercial or residential traffic on some stretches •Intermittent low to moderate sound associated with vehicular travel	•Destinations and natural attractions of high interest •Provides a sense of being in a natural park environment •High probability of encountering other visitors •Solitude not expected •Limited opportunities for challenge and adventure •Few outdoor skills needed •Few outdoor skills needed •Intermittent low to moderate sound associated with motorized over-snow vehicle travel expected	•Natural attractions of high interest •Moderate probability of encountering other visitors •Chance to view the natural environment important •Solitude occasionally possible, but not expected •Some outdoor skills necessary •Some opportunities for challenge and adventure
Appropriate Activities and Facilities	•Visitor centers •Warming huts •Overnight lodging •Gas stations •Food services •Staging areas •Administrative facilities •Structured interpretive programs	•Wheeled vehicular travel only •Paved and unpaved roadways, signs, barriers •Interpretive media and display •Utilities •Scenic overlooks, restrooms, trailhead areas, pullouts	•Predominantly oversnow vehicular travel; some non-vehicular travel •Oversnow roads, signs, barriers •Interpretive media, programs and displays •Utilities •Scenic overlooks, restrooms, trailhead areas, pullouts	•Predominantly oversnow vehicular travel; some non- vehicular travel •Oversnow trails, signs, barriers •Utilities, scenic overlooks, trailhead areas, restrooms

Table 6a. Description of management zones for alternative 2.

Zones-	5 Ungroomed Motorized Trail or Area	6 Groomed Nonmotorized Trail	7 Ungroomed Nonmotorized Trail or Area	8 Backcountry Nonmotorized Area	9 Sensitive Area (no winter use)
Resource Condition or Character	•Ungroomed snow surface •Marked except for frozen water surfaces •Gentle to moderate terrain •Vehicles must meet sound and emission standards •Generally good to excellent air quality •Sound levels intermittent, low to moderate •Wide enough to accommodate existing road corridor, pullouts, overlooks trailheads, trailhead areas •Low to moderate modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety •Visitor use may compromise resource values	Smooth groomed snow surface Marked and signed Generally gentle terrain Creates predictable patterns of winter use and confines resource impacts to narrow corridors Good to excellent air quality Minimal modification of resources to accommodate operational needs, resource protection, visitor enjoyments, and safety Visitor use may compromise resource values Sound from human sources is intermittent, audibility is generally low	•Ungroomed snow surface •Marked or unmarked •Gentle to steep terrain •Creates fairly predictable patterns of winter use and confines resource impacts to relatively narrow corridors •Excellent air quality •Minimal modification of resources to accommodate operational needs, resource protection, visitor enjoyments, and safety •Sound from human sources is intermittent, audibility is low to nonexistent •Visitor use may compromise resource	-Appears natural and untouched by humans -Gentle to steep terrain -Excellent air quality -Little to no evidence of visitor impacts -Little to no modification of resources to accommodate operational needs, resource protection, visitor enjoyments, and safety -Visitor use may compromise resource values -Natural sound predominates the soundscape	Appears natural and untouched by humans Gentle to steep terrain Excellent air quality Natural and/or cultural resource values so vulnerable that winter visitor use is not permitted
Visitor Experience	•Natural attractions of high interest •Moderate probability of encountering other visitors •Chance to view the natural environment important •Solitude occasionally possible, but not expected •Moderate outdoor skills necessary •Moderate opportunities for challenge and adventure •Relatively quiet	Provides a sense of a generally natural landscape Natural attractions of high interest High probability of encountering other users Solitude occasionally possible, but not expected Provides some sense of adventure Few outdoor skills needed Quiet desirable but not essential for visitor enjoyment	Provides a sense of a generally natural landscape Natural attractions of high interest Moderate probability of encountering other users; probability increases near destination areas Low to moderate opportunities for solitude Feels somewhat distant from most comforts, conveniences, and facilities Generally requires a commitment to time-consuming and physically and mentally exerting activities Provides opportunities for adventure and physical challenge Outdoor skills needed Natural sounds predominate	•Provides a strong sense of immersion in a very natural landscape •Natural quiet expected •Low probability of encountering other users; good opportunities for solitude •Provides strong sense of remoteness •Requires a commitment to time-consuming and physically and mentally exerting activities Good opportunities for adventure and physical challenge •Outdoor skills such as route finding, avalanche hazard forecasting, and survival knowledge necessary •Natural sounds predominate; natural quiet is desirable	Natural soundscapes predominate
Appropriate Activities and Facilities	•Predominantly oversnow vehicular travel; some non-vehicular travel •Oversnow roads, signs, barriers •Interpretive displays •Utilities, restrooms, scenic overlooks, trailhead areas	Nonmotorized activities only, such as skiing and snowshoeing; some administrative motorized vehicle travel necessary to accomplish grooming Oversnow trails, markers, signs, Interpretive media Scenic overlooks, trailheads	Nonmotorized activities only, such as skiing and snowshoeing Signs or other route markers	•Nonmotorized activities only, such as skiing and snowshoeing •No facilities, signs or route markers	•Limited resource management activities •No visitor activities facilities

Implementation Strategies for Alternative 2

Once a decision is made pursuant to this SEIS, which sets the program goals and plan in place for winter use in the parks, some strategies may be applied to assist in the implementation of the plan. Generally, these strategies are regarded as tools that currently exist within the parks' authority to assist in *implementing* the plan. The environmental impacts, adverse or beneficial, of these strategies are not specifically addressed in this SEIS, as some actions may be categorically excluded or do not require an EIS for approval. Implementation strategies are like mitigation measures in that they may function to reduce anticipated impacts as well as facilitate the achievement of a plan goal.

- Establish an additional new daily entrance fee structure of \$10 per snowmobile and \$5 per snowcoach passenger.
- Establish a reservation system, with a timed entry limited system for all visitors. Snowmobile outfitters and gateway snowmobile rental businesses would automatically receive a daily allocation off-the-top in accordance with their operating permit [even rental shops would be required to be "permitted" by NPS to certify that their sleds meet all emission/sound requirements], not to exceed 80% of the daily entrance limit, after which public snowmobile reservations would be issued on a first-come, first-serve basis until the daily maximum entry for each gate is reached [and if the 80% was not fully utilized they would be released on a daily basis for "public" entries]. A reservation system most likely would not be fully used until use limits are implemented which decrease historic use levels at particular entrances.
- Increase ranger patrols to target wildlife concentration areas and heavy visitor use areas. Strictly enforce speed limits and off-trail travel violations by motorized and nonmotorized visitors.
- Establish an aggressive Visitor Information Program for winter recreation use of the Greater Yellowstone Area with a goal of continual evaluation and improvement. Provide optional orientation briefings each evening in partnership with gateway communities and businesses to educate all users regarding their upcoming visit to the park and what they should know about visitor safety, operational laws, user etiquette, and interaction with wildlife and other park visitors.
- Require only pre-paid entrance permits, which have been issued by outlets in West Yellowstone in conjunction with the reservation system, for all snowmobiles entering through the West Entrance. All pre-paid permits must be clearly displayed on the snowmobile windshield or on the chest of the snowmobile driver with the permit expiration date clearly visible in large numbers to facilitate efficient express entry at the entrance plaza.
- Establish incentives to increase the percentage of snowmobiles with two passengers entering YNP from the West Entrance from the current 20% to 80% within 3 to 5 years.
- Establish incentives to increase the percentage of visitors using snowcoaches to enter YNP from the West Entrance from the current 10% to 30% over 3 to 5 years.
- Establish a "Bison Brigade", consisting of trained volunteers, interns, and park rangers to make contact with visitors to provided safety and interpretive information and to provide escorts through wildlife-sensitive areas.
- Establish a "Park Watch" program to enlist visitors, snowcoach drivers and snowmobile guides to participate in reporting inappropriate behavior.

• Establish an interagency Yellowstone Recreation Advisory Council to assist recreation program management for the Greater Yellowstone Area.

ALTERNATIVE 3

This alternative (Figures 3 and 6) is an adaptive management strategy designed to mitigate impacts on visitor experience and access, wildlife, air quality and natural sound while allowing snowmobile access on all major oversnow routes. The identification of a visitor carrying capacity is a primary component of the adaptive management process under this alternative. This alternative describes a desired future condition for park resources and visitor experiences (Tables 7 and 7a). The adaptive management component of the alternative defines indicators of those experiences and resource conditions and establishes standards that describe at what point management must take action in order to maintain them.

Until that time, interim snowmobile use levels would be implemented. The interim use levels in this alternative were developed to mitigate the adverse effects of winter use on wildlife, visitor experience, air quality and natural sound that are described in the *Winter Use Plans Final Environmental Impact Statement for Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway* and the *Record of Decision for the Yellowstone and Grand Teton National Parks and the John D. Rockefeller Jr., Memorial Parkway*. Adaptive management programs would be implemented to assess the success of the interim numbers to be assessed on an annual basis. The results of the adaptive management program would determine the need for adjusting snowmobile numbers up or down to ensure adequate protection of air quality, wildlife resources, visitor experience and natural soundscapes (as defined in NPS Management Policies 2001). Adaptive management and monitoring standards and indicators for this alternative are described in Table 11 and are located at the end of this Chapter.

The visitor carrying capacity component of adaptive management would incorporate the Visitor Experience Resource Protection (VERP) model (and others) and would be completed not later than 2005.

Table 7. Description of management zones for alternative 3.

Management Zones →	1 Destination or Support Area	2 Plowed Road	3 Groomed Motorized Route	4 Groomed Motorized Trail
Resource Condition or Character	•Minimally to highly developed hubs of activity •Facilities and signs of human activity obvious, but natural elements also present •Moderate to high management and/or modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety •As small as possible while still providing essential services •Visitor use may compromise natural resource values	•As narrow as possible to protect resources, but wide enough to accommodate safety pullouts, overlooks, and trailhead areas •Moderate to high management and/or modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety •Good to excellent air quality •Visitor use may compromise resource values	•Smooth groomed snow surface •Generally gentle terrain •Good to excellent air quality •As narrow as possible to protect resources, but wide enough to accommodate safety pulouts, overlooks, and trailhead areas •Moderate to high management and/or modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety •Visitor use may compromise resource values •Vehicles must meet sound and emission standards	•Narrower, groomed but less maintained snow surface •Gentle to moderate terrain •Vehicles must meet sound and emission standards •Generally good to excellent air quality •Occasional human caused sound, audibility low to moderate •As narrow as possible to protect resources, but wide enough to accommodate pullouts, overlooks trailheads, trailhead areas •Minimal modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety eVisitor use may compromise resource values
Visitor Experience	•Facilities convenient and blended with adjacent resources •Many opportunities for social interaction •High sound levels possible •High probability of encountering other visitors and NPS staff	•Destinations and natural attractions of high interest •High probability of encountering other visitors •Provides a sense of being in a natural park environment •Visitor experience mostly visual •Occasional quiet and solitude •Commercial or residential traffic on some stretches •Intermittent low to moderate sound associated with vehicular travel expected	Destinations and natural attractions of high interest Provides a sense of being in a natural park environment High probability of encountering other visitors Solitude occasionally possible, but not expected Limited opportunities for challenge and adventure Few outdoor skills needed Some intermittent low-level to moderate sound associated with snowmachine travel expected	•Natural attractions of high interest •Moderate probability of encountering other visitors •Chance to view the natural environment important •Solitude occasionally possible, but not expected •Some outdoor skills necessary •Some opportunities for challenge and adventure •Relatively quiet; sight and smell of vehicle exhaust not expected
Appropriate Activities and Facilities	•Visitor centers •Warming huts •Overnight lodging •Gas stations •Food services •Staging areas •Administrative facilities •Structured interpretive programs	•Wheeled vehicular travel only •Paved and unpaved roadways, signs, barriers •Interpretive media and display •Utilities •Scenic overlooks, restrooms, trailhead areas, pullouts	•Predominantly oversnow vehicular travel; some non-vehicular travel •Oversnow roads, signs, barriers •Interpretive media, programs and displays •Utilities •Scenic overlooks, restrooms, trailhead areas, pullouts	•Predominantly oversnow vehicular travel; some non-vehicular travel •Oversnow trails, signs, barriers •Utilities, scenic overlooks, trailhead areas, restrooms

CHAPTER III Alternatives

Table 7a. Description of management zones for alternative 3

Zones→	5 Ungroomed Motorized Trail or Area	6 Groomed Nonmotorized Trail	7 Ungroomed Nonmotorized Trail or Area	8 Backcountry Nonmotorized Area	9 Sensitive Area (no winter use)
Resource Condition or Character	•Ungroomed snow surface •Marked except for frozen water surfaces •Gentle to moderate terrain •Vehicles must meet sound and emission standards •Generally good to excellent air quality •Sound levels intermittent, low to moderate •Wide enough to accommodate existing road corridor, pullouts, overlooks trailheads, trailhead areas •Low to moderate modification of resources to accommodate operational needs, resource protection, visitor enjoyment, and safety •Visitor use may compromise resource values	*Smooth groomed snow surface *Marked and signed *Generally gentle terrain *Creates predictable patterns of winter use and confines resource impacts to narrow corridors *Good to excellent air quality *Minimal modification of resources to accommodate operational needs, resource protection, visitor enjoyments, and safety *Visitor use may compromise resource values *Sound from human sources is intermittent, audibility is low to nonexistant *Natural sound predominates the soundscape	•Ungroomed snow surface •Marked or unmarked •Gentle to steep terrain •Creates fairly predictable patterns of winter use and confines resource impacts to relatively narrow corridors •Excellent air quality •Minimal modification of resources to accommodate operational needs, resource protection, visitor enjoyments, and safety •Natural sound predominates the soundscape •Visitor use may compromise resource values	Appears natural and untouched by humans Gentle to steep terrain Excellent air quality Little to no evidence of visitor impacts Little to no modification of resources to accommodate operational needs, resource protection, visitor enjoyments, and safety Visitor use may compromise resource values Natural sound predominates	Appears natural and untouched by humans Gentle to steep terrain Excellent air quality Natural and/or cultural resource values so vulnerable that winter visitor use is not permitted
Visitor Experience	Natural attractions of high interest Moderate probability of encountering other visitors Chance to view the natural environment important Solitude occasionally possible, but not expected Moderate outdoor skills necessary Moderate opportunities for challenge and adventure Relatively quiet; sight and smell of vehicle exhaust not expected	Provides a sense of immersion in a generally natural landscape Natural attractions of high interest High probability of encountering other users Solitude occasionally possible, but not expected Provides some sense of adventure Few outdoor skills needed Quiet desirable but not essential for visitor enjoyment	Provides a sense of immersion in a generally natural landscape Natural attractions of high interest Moderate probability of encountering other users, probability of encountering other users, probability increases near destination areas Moderate opportunities for solitude Feels somewhat distant from most comforts, conveniences, and facilities Generally requires a commitment to time-consuming and physically and mentally exerting activities Provides opportunities for adventure and physical challenge Outdoor skills needed Natural sounds predominate natural quiet is desirable	Provides a strong sense of immersion in a very natural landscape Natural quiet expected Low probability of encountering other users; good opportunities for solitude Provides strong sense of remoteness Requires a commitment to timeconsuming and physically and mentally exerting activities Good opportunities for adventure and physical challenge Outdoor skills such as route finding, avalanche hazard forecasting, and survival knowledge necessary Natural sounds predominate natural quiet is desirable	• Natural soundscapes predominate
Activities and Facilities	Predominantly oversnow vehicular travel; some non-vehicular travel Oversnow roads, signs, barriers Interpretive displays Utilities, restrooms, scenic overlooks, trailhead areas	Nonmotorized activities only, such as skiing and snowshoeing Oversnow trails, markers, signs, Interpretive media Scenic overlooks, trailheads	•Nonmotorized activities only, such as skiing and snowshoeing •Signs or other route markers	 Nonmotorized activities only, such as skiing and snowshoeing No facilities 	•Limited resource management activities •No visitor activities or facilities

ALTERNATIVE 3

Actions and Assumptions Common to All Three Units

- New cleaner and quieter snowmachine technologies would be required for all recreational oversnow vehicles entering the parks. This requirement would be implemented through the issuance of outfitter and guide permits by the NPS. Initially, emission and sound requirements would be based on current best available technology and evaluated annually under an adaptive management framework. The requirement to meet the best available technology will remain ongoing. The yearly evaluation would result in an adjustment of snowmobile use limits if necessary for protection of air quality, wildlife, visitor experience and natural soundscapes (as defined by NPS policy) as determined by monitoring.
- Establish a winter visitor carrying capacity for all three-park units. The carrying capacity would be determined by defining the desired future condition for park resources and visitor experiences, the indicators of a quality experience and resource conditions and the establishing of standards that describe at what point management must take action beyond that which is to be described in the decision resulting from this SEIS. In addition a monitoring program would be developed and implemented and the responsive management actions would be defined. The visitor carrying capacity study would include a public participation component and utilize the NPS approved Visitor Experience Resource Protection Framework (VERP) and other appropriate methodologies. The study would be completed no later than May 2005, subject to available funding.
- Implement interim snowmobile use limits until the visitor carrying capacity study is completed. Under this alternative, the initial interim limits would be based on the level of effect on wildlife, visitor experience, air quality and natural sound that were determined in the Winter Use Plans Final Environmental Impact Statement for Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway. The implementation of use limits may require one of the following: reservations, permits or differential fees. The initial interim use limits and vehicle types are described by road segment in the table below.

Table 8. Interim Use Limits Proposed Under Alternative 3.

Road Segment	Vehicle Type	Interim Use Levels
Mammoth south to Old Faithful and east to Canyon and south to Fishing Bridge	Snowcoach and snowmobile travel	Snowmobiles through the North Entrance limited to about 100 per day ¹⁰
West Entrance to Old Faithful	Snowcoach and snowmobile travel	Snowmobiles entering through the West Entrance limited to 330 snowmobiles per day
East Entrance to Fishing Bridge	Snowmobiles only	Snowmobiles entering through the East Entrance limited to about 100 per day
Fishing Bridge south to Flagg Ranch and west to Old Faithful	Snowcoach and snowmobile travel	Snowmobiles entering through the South Entrance limited to about 400 per day

⁹ Initially, the best available technology is that described in ISMA correspondence for exisitng, new production 4-stroke snowmobiles.

¹⁰ See DSEIS Appendix C, letter of Nov 8, 2001. Levels are set to accommodate current average daily use except for West Yellowstone, Montana where use is lower to provide a starting point to mitigate multiple resource impacts from West Yellowstone to Old Faithful resulting from present levels of use. Data indicates that use over about 300 snowmobiles causes deterioration of the snow surface on some days.

Road Segment	Vehicle Type	Interim Use Levels
Continental Divide Snowmobile Trail (East Entrance GTNP to Colter Bay)	Snowmobiles only	Snowmobiles limited to about 100 per day.
Colter to Flagg Ranch (highway surface) 11	Snowcoach and snowmobile travel	Snowmobiles limited to about 100 per day
Grassy Lake Road	Snowmobiles and snowcoaches	Snowmobiles - about 100 per day

- Implement an intensive adaptive management and monitoring program to ensure that desired resource conditions and visitor experiences are met. The initial monitoring and adaptive management standards and indicators are defined in Table 11.
- Beginning in the winter season of 2003-2004, allow mass transit snowcoaches only
 when their sound levels are at or below 75 decibels as measured on the A-weighted
 scale at 50 feet at full throttle. Continue to work with snowcoach manufacturers and
 operators to meet a long-term goal to lower snowcoach sound levels to 70 decibels or
 lower.
- Prohibit late night oversnow recreation travel from about 8 P.M. to 7:30 A.M. Travel during this period of time may be approved by the park superintendent for administrative or emergency purposes, or by special permit.
- In the winters of 2001-2003, allow existing commercial snowcoach operators to increase their fleet size and encourage snowmobile and other new operators to purchase coaches and reduce snowmobile numbers. Base snowmobile use limits on a 10-year average peak day.
 - In 2002-2003 allow snowmobile use to the current use level in YNP and GTNP and the Parkway.
 - In 2002-2003 for GTNP eliminate snowmobile use on the Teton Park Road and all motorized use on Jackson Lake.
 - In 2003-2004, implement interim snowmobile limits.
- Recreational snowmobile access allowed in the parks and the Parkway only when accompanied by an NPS permitted guide. Guided groups may contain from 3 to 11 snowmobiles including the guide.

Actions for Yellowstone National Park

- Continue all existing major groomed motorized routes (zone 3).
- Allow snowcoaches only on groomed motorized trails (zone 6) such as the Fountain Flats Road.
- Implement the winter use season during the period from late November to mid-March.
- To allow for a period of quiet recreation opportunities beginning the Friday following Presidents Day weekend, allow access in YNP only via snowcoach, snowshoes or skis.
- Early season travel by rubber track vehicle only until sufficient snow for snowmachines has accumulated.
- Reduce administrative snowmobile use from the 106 currently used and supplement
 with administrative snowcoaches, subject to available funding and authority. Phase in a
 limited number of administrative snowmobiles to a type that meet the best available
 emission and sound limits.

¹¹ Current Flagg Ranch permit will be honored concerning access by plowed road until the current permit expires in 2008.

- Continue allowing personal non-recreation use of snowmobiles by employees and their families living in the interior of Yellowstone. Subject to available funding and authority, provide administrative snowcoaches for their use and implement programs to replace their current snowmobiles with snowmobiles that utilize the best clean and quiet technologies available to meet NPS requirements.
- Allow limited use of snowmobiles by concessionaires. Require (through permit and contracts) best available clean and quiet technologies as they are developed and encourage the use of snowcoaches.
- During the winter of 2003-2004, if at lest 600 snowcoach seats are not available for visitors parkwide, YNP would allow up to 220 more snowmobiles to enter through the West Entrance each day (the daily ceiling would not exceed 550 snowmobiles through the West Entrance for that winter season) so that historic average use levels are maintained. The number of coach seats will be determined as of December 1 for the upcoming winter.

Actions for Grand Teton and the Parkway

- Current Flagg Ranch permit will be honored concerning access by plowed road until the current permit expires in 2008.
- Continue existing motorized routes (zone 3), except on the Teton Park Road and the frozen surface of Jackson Lake.

THE PREFERRED ALTERNATIVE AND THE ENVIRONMENTALLY PREFERRED ALTERNATIVE

The NPS has not selected a preferred alternative for this DSEIS. Consistent with CEQ regulation 40 CFR §1502.14(e) the NPS will select a preferred alternative to be published in the FSEIS. Similarly, the NPS has not selected an environmentally preferred alternative. The NPS will select an environmentally preferred alternative as part of the decision-making process for the record of decision as required by CEQ regulation (40 CFR §1505.14(b).

The following graphics were removed for faster loading. Download them separately from the website.

Table 9. Summary of alternative actions.

Table 10. Summary of effects.

Table 11. Adaptive management indicators and standards by management zone and alternative

Figure 2. Alternatives 1a and 1b for Yellowstone National Park.

Figure 3. Alternatives 2 and 3 for Yellowstone National Park.

Figure 4. Alternatives 1a and 1b for Grand Teton National Park and the John D. Rockefeller, Jr., Memorial Parkway.

Figure 5. Alternative 2 for Grand Teton National Park and the John D. Rockefeller, Jr., Memorial Parkway.

Figure 6. Alternative 3 for Grand Teton National Park and John D. Rockefeller, Jr., Memorial Parkway.